

**WHAT IS CLAIMED:**

1. A qualifying connection for a recognition apparatus for identifying a type of surgical instrument attached to a surgical generator, the qualifying connection comprising:

a plug having at least one mechanical interface which matingly engages a corresponding mechanical interface disposed on the surgical generator;

a first optical coupling disposed on the plug and a second optical coupling disposed on the generator, the first and second optical couplings optically communicating upon mating engagement of the plug and the generator, the first and second optical couplings, when arranged for optical communication, communicating identifying information to the generator relating to the type of surgical instrument.

2. A qualifying connection according to claim 1, further comprising:

an identifying circuit disposed in the generator and in electrical communication with at least one optical coupling which differentiates the type of surgical instrument attached to the generator and which provides a signal to the generator upon verification of the type of surgical instrument attached thereto.

3. A qualifying connection according to claim 2, further comprising:  
  
a switch in electrical communication with the identifying circuit which regulates the electrosurgical energy from the generator to the instrument in accordance with the type of surgical instrument attached to the generator.
4. A qualifying connection according to claim 1 wherein the optical coupling on the plug includes a light modifier which modifies the radiation of the light for thereafter receipt by the optical coupling on the generator, the modified radiation of light being indicative of the type of surgical instrument connected to the generator.
5. A qualifying connection according to claim 4 wherein infrared transmitters are positioned on the surgical generator proximal the light modifier for optical communication of the light therethrough.
6. A qualifying connection according to claim 4 wherein the light modifier of the optical coupling on the plug includes one of a diffuse surface, a coating, a matrix of apertures and a pre-selective light responsive material.
7. A qualifying connection according to claim 6 wherein the optical coupling of the generator includes at least one light transmitter and the light modifier on the plug alters the optical energy transmitted from the at least one transmitter.

8. A qualifying connection according to claim 2 wherein the identifying circuit includes a memory for controlling the activation or deactivation of electrosurgical energy according a predetermined criteria for the type of instrument identified.
9. A qualifying connection according to claim 1 further comprising a display indicator which provides visual feedback as to the type and mechanical mating integrity of the surgical instrument attached to the generator.
10. A qualifying connection according to claim 1 wherein at least one of the mechanical interfaces of the plug and the corresponding mechanical interface on generator include fluid passages for delivering one of suction and irrigation to the surgical instrument.
11. A qualifying connection according to claim 1 wherein the qualifying connection communicates treatment information from the surgical instrument through at least one of the optical couplings regarding the status of tissue being treated.
12. A qualifying connection according to claim 1 wherein the qualifying connection communicates parametric information from the surgical instrument through at least one of the optical couplings regarding at least one of tissue temperature, thermal spread, tissue eschar and tissue desiccation.